Name:_____ Hour: _____ Date: _____

NOTES: Section 4.4 – Solve $ax^2 + bx + c = 0$ by Factoring

Goals: #1 - I can factor a quadratic in the form $ax^2 + bx + c$ when $a \neq 1$.

#2 - I can factor a difference of two squares when $a \neq 1$. 

#3 - I can use the zero product property to solve $ax^2 + bx + c = 0$ by factoring when $a \neq 1$

Homework: Lesson 4.4 Worksheet

Exploration #1: Work with a partner. Find the product.

1. $(4y - 3)(3y + 8)$
2. $(5m + 6)(5m - 6)$

CHALLENGE: Can you go backwards? Break $5x^2 - 17x + 6$ into factors.

Notes:

Recall, the standard form of a quadratic function: _____

When _____, it is simple to factor!

Example: $x^2 + 2x - 35$

When _____, it is not as simple… We are going to use the _____ to factor these beasts.

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Example #1: Factor the expression.

1. $5x^2 - 17x + 6$
2. $8t^2 + 38t - 10$

You practice: Factor the expression.

1. $3x^2 + 5x - 12$
2. $12u^2 - 28u - 24$

Notes:

There are still _____ factoring patterns we can look for!

- _____ :

  Examples:

- _____ :

  Examples:

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Example #2: Factor the expression.

1. $16x^2 - 1$
2. $4r^2 - 28r + 49$

Notes:

We can still use _____ to solve certain _____.

Example #3: Solve the equation.

1. $3x^2 + 10x - 8 = 0$
2. $5p^2 - 16p + 15 = 4p - 5$

You practice: Solve the equation.

1. $6x^2 - 3x - 63 = 0$
2. $12r^2 + 7r + 2 = r + 8$